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| APPLICATION NO.                                                                                               | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO.     |
|---------------------------------------------------------------------------------------------------------------|-------------|----------------------|------------------------|----------------------|
| 10/662,823                                                                                                    | 09/16/2003  | Frank G. Hughes      | 08350.0673             | 1098                 |
| 7590                                                                                                          | 08/12/2004  |                      |                        |                      |
| Finnegan, Henderson, Farabow,<br>Garrett & Dunner, L.L.P.<br>1300 I Street, N.W.<br>Washington, DC 20005-3315 |             |                      | EXAMINER<br>[REDACTED] | ALI, HYDER           |
|                                                                                                               |             |                      | ART UNIT<br>[REDACTED] | PAPER NUMBER<br>3747 |

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/662,823             | HUGHES ET AL.       |  |
|                              | Examiner<br>HYDER ALI  | Art Unit<br>3747    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 10-15 is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) 9 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | Paper No(s)/Mail Date. _____.                                               |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/26/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|                                                                                                                                              | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Inventorship*

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamiya (JP 8-303295).

As to Claim 1, Kamiya discloses a cylinder block 2 for an internal combustion engine, comprising: at least one cylinder bore; a coolant jacket 6 at least partially surrounding the at least one cylinder bore; and a deck for attachment of a cylinder head; wherein the deck is an open top deck and wherein the coolant jacket includes an upper portion and a lower portion having first and second widths, respectively, and an

intermediate portion between the upper and lower portions, the intermediate portion having a third width which is greater than the first and second widths.

As to Claim 2, Kamiya discloses the upper portion is adjacent the top deck.

As to Claims 3 and 4, Kamiya discloses the lower portion is adjacent the base of the coolant jacket.

As to Claim 7, Kamiya discloses the first and second widths are substantially the same.

As to Claim 8, Kamiya discloses the coolant jacket has a first taper between the upper portion and the intermediate portion, and a second taper between the intermediate portion and the lower portion, the first and second tapers being in the range of about 1° to about 10° from vertical.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya (JP 8-303295) in view of Sick et al (US 5,131,356). Sick et al discloses a cast linerless single cylinder or multicylinder block. It would have been obvious to a person having an ordinary skill in the art to modify Kamiya by employing linerless cylinder block in order to provide at least one linerless cylinder bore.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya (JP 8-303295) in view of Katoh et al (US 5,357,921). Katoh et al discloses at least two cylinder bores, the bores having conjoined cylinder walls 20. It would have been obvious to a person having an ordinary skill in the art to modify Kamiya by employing the at least two cylinder bores, the bores having conjoined cylinder walls 20 in order to provide at least two cylinder bores having conjoined cylinder walls.

***Allowable Subject Matter***

Claims 10-15 are allowed.

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references by Fenn et al and Shade both disclose casting engine cylinder blocks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (703) 308-3949. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Hyder Ali*

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*Tony M. Argenbright*  
**Tony M. Argenbright**  
Primary Examiner  
Art Unit 3747